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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
JUNTIMA, NITTAYA	
ART UNIT	**PAPER NUMBER**
2663	

DATE MAILED: 08/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/780,619	LUCIONI, GONZALO	
	Examiner	Art Unit	
	Nittaya Juntima	2663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 February 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) *3 and 13* is/are withdrawn from consideration.

5)☒ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-2, 4-5, 8-9, 11-12, 14-15* is/are rejected.

7)☒ Claim(s) *6,7 and 10* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 February 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *paper no. 8*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to due to the following:

- in Fig. 1, EG1-2, VM1-2, AU1A-AU1B, AU2A-AU2B, ZU1A-ZU1B, ZU2A-ZU2B, ST1-2, and W1-W2 should be labeled as "communication terminals", "switching modules", "sampling rate conversion devices", "timescale conversion devices", "controllers", and "monitoring devices," respectively, to convey meaningful meanings in order to enable one to properly understand the disclosed invention; and

- in Figs. 2 and 3, ZEIT should also be labeled as "time."

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 2 are method claims; however, there are no claimed steps included in the claims. Therefore, the claims are vague and indefinite.

Claim 9, the limitation "the received audio data are converted" is vague and indefinite. It cannot be determined from the claim language as what or how the received audio data are converted into, i.e. converted from audio data into what, and how? Therefore, the claim is vague and indefinite.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 1, 4-5, 8,** and **11** are rejected under 35 U.S.C. 102(b) as being anticipated by Flanagan (USPN 4,100,377).

Regarding **claim 1**, as shown in Fig. 2, Flanagan teaches a method for improving the quality of an audio transmission in which ***audio data*** (speech, col. 3, ll 26-30) including ***samples*** (samples must be included in voice signal, col. 3, ll 52-54) of ***an audio signal*** (voice signal, col. 3, ll 52-54) are asynchronously transmitted in ***data packets*** (packets, col. 6, ll 24-31) from ***a transmitting communication system*** (transmitter 10 in Fig. 1) via ***a packet-oriented communication network*** (packet transmission system, col. 1, ll 53-63) to ***a receiving communication system*** (receiver 11 in Fig. 1) and ***an information item*** (load factor on lead 55) relating to the transmission of data packets is detected, wherein ***the audio data*** (speech) are converted such that their sampling rate is altered by ***means of digital filtering*** (when digital voice signals are input, their sampling rate altered by the sample gate 41 must be done by means of digital filtering, col. 7, ll 57-61 and col. 3, ll 50-55, 59-62, 67-col. 4, ll 1-5), the sampling rate being altered based on the detected information item, in such a manner that due to the altered sampling rate, a quality of service of the audio transmission is optimized with regard to a current transmission situation indicated by the detected information item (quality of encoded speech is optimized based on the load factor on lead 55 to relieve the load on the transmission facilities, col. 5, ll 18-24 and col. 4, ll 43-46).

Regarding **claim 4**, Flanagan teaches that ***the audio data*** (speech) to be transmitted are converted by ***the transmitting communication system*** (transmitter 10 in Fig. 1) and ***a conversion message*** (a coded block with a header portion including a code stamp indicating the adjusted sampling rate, col. 6, ll 24-31, see also col. 5, ll 18-24) about the conversion is transmitted from the transmitting communication system to ***the receiving communication system*** (receiver 11 in Fig. 1).

Regarding **claim 5**, as shown in Fig. 3, Flanagan teaches that the transmitted audio data are reconverted by the receiving communication system (receiver 11 in Fig. 1), the change in the audio data taking place in the reconversion being determined by means of the conversion message transmitted (col. 6, ll 7-17, see also ll 24-31).

Regarding **claim 8**, as shown in Fig. 3, Flanagan teaches that ***a detected incorrect adaptation of the data rate of the received audio data*** (delay in transmission time for each speech packet must be detected in order to provide reassembled voice signals with reasonable speech quality using time stamp at the receiving end, col. 7, ll 40-46) is at least partially compensated by the receiving communication system (receiver 11 in Fig. 1) by means of a conversion of the received audio data (time stamp used in compensating the delay is used in converting the received speech packet containing audio data into voice signal, col. 7, ll 40-56).

Regarding **claim 11**, as shown in Fig. 2, Flanagan teaches ***a communication system*** (TASI system in Fig. 1) for transmitting ***audio data*** (speech, col. 3, ll 26-30) including ***samples*** (samples must be included in voice signal, col. 3, ll 52-54) of ***an audio signal*** (voice signal) via ***a packet-oriented communication network*** (packet transmission system, col. 1, ll 53-63), comprising:

a monitoring means unit (code stamp register 52, col. 4, ll 43-46) for detecting ***an information item*** (load factor, col. 4, ll 43,-46) relating to the transmission of ***data packets*** (packets, col. 6, ll 24-31) including audio data;

a digital sampling rate conversion device (sample gate 41, col. 3, ll 59-col.4, ll 1-5, see also col. 5, ll 18-24) for converting the audio data by altering their sampling rate; and

a control means unit (sample rate generator 43, col. 5, ll 18-24) for controlling the sampling rate alteration based on the information item detected.

5. **Claims 2** and **12** are rejected under 35 U.S.C. 102(b) as being anticipated by Chen et al. (USPN 6,665,751 B1).

Regarding **claim 2**, Chen et al. teach a method for improving the quality of an audio transmission in which ***audio data*** (audio data, col. 4, ll 1-5) including ***samples of an audio signal*** (samples of an audio signal must be included in audio data, col. 4, ll 1-5) are asynchronously transmitted in ***data packets*** (packets, col. 4, ll 1-10) from ***a transmitting communication system*** (streaming server 111 in Fig. 1) via ***a packet-oriented communication network*** (LAN having communication link 109 in Fig. 1, col. 4, ll 1-10) to ***a receiving communication system*** (computer system 100 in Fig. 1) and ***an information item*** (delay in receipt of the packets from streaming server 111, col. 4, ll 11-17) relating to the transmission of data packets is detected, wherein the audio data are digitally converted such that the duration of an audio signal represented by the audio data is modified while retaining a pitch of the audio signal, the duration being modified based on the detected information item, in such a manner that due to the modified duration (the playback rate of the audio is adjusted, i.e. using time-scale modification, by the streaming media play 200 in Fig. 2 without changing the pitch, col. 4, ll 11-27 and 28-42, see also the Abstract), a quality of service of the audio transmission is optimized with regard to a current transmission situation indicated by the detected information item (the quality of the audio is inherent optimized according to network condition as indicated by the delay, col. 4, ll 11-19, see also the Abstract).

Regarding **claim 12**, Chen et al. teach ***a communication system*** (system as shown in Fig. 1) for receiving ***audio data*** (audio data, col. 4, ll 1-5) including ***samples of an audio signal*** (samples of an audio signal must be included in audio data, col. 4, ll 1-5) via ***a packet-oriented communication network*** (LAN having communication link 109 in Fig. 1, col. 4, ll 1-10), comprising:

a monitoring means unit (a monitoring means unit must be inherently included in the streaming media play 200 for sensing the delay in packet receipt, col. 4, ll 13-17) for detecting ***an information item*** (delay in receipt of the packets from streaming server 111, col. 4, ll 11-17) relating to the transmission of data packets containing audio data;

a digital timescale conversion device (speed component 204 in Fig. 2, col. 4, ll 31-40) for converting the audio data by changing the duration (time-scale modification, col. 4, ll 17-27) of an audio signal represented by the audio data while retaining a pitch of the audio signal; and

a control means unit (rate component 202 in Fig. 2, col. 4, ll 31-40, see also ll 11-17) for controlling the change in duration based on based on the information item detected.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. **Claim 14** is rejected under 35 U.S.C. 103(a) as being unpatentable over Flanagan (USPN 4,100,377) in view of Duan (USPN 6,000,834).

Regarding **claim 14**, Flanagan fails to teach that the digital sampling rate conversion device exhibits a digital filter chip for converting the audio data.

As shown in Fig. 2, Duan teaches ***a digital filter chip*** (an audio sampling rate conversion filter 12, col. 3, ll 22-39) for converting audio data.

Given the teaching of Duan, it would have been obvious to one skilled in the art at the time the invention was made to include a digital filter chip. The suggestion/motivation to do so would have been to provide audio sampling rate conversion from one sample rate to another sample rate (Abstract and col. 3, ll 28-39).

8. **Claim 15** is rejected under 35 U.S.C. 103(a) as being unpatentable over Flanagan (USPN 4,100,377).

Flanagan does not teach that the digital timescale conversion device exhibits a digital signal processor for converting the audio data.

However, it is well known in the art that a digital signal processor, which is designed to solve specific processing problem, processes very efficiently and in real-time a digital data stream that is sampled from analog signals including audio. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to include the digital timescale conversion device exhibits a digital signal processor for converting the audio data as recited in the claim. The suggestion/motivation to do so would have been to provide efficient and in real-time digital timescale conversion to the audio data using a digital signal processor.

Allowable Subject Matter

9. Claims 6-7 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nittaya Juntima whose telephone number is 703-306-4821. The examiner can normally be reached on Monday through Friday, 8:00 A.M - 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 703-308-5340. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nittaya Juntima
July 29, 2004
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